

Work Order ID 74802

74802

Page 1

October 6, 2011 1:41:45 PM

Item ID: D3560-042

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Arm Weldment

Start Date: 10/06/11 Start Qty: 4.00

4

Cust Item ID:

Required Date: 10/17/11 Req'd Qty: 4.00

4

Customer:

Reference:

Run Start ***NR1***

Approvals: Process Plan: M.L.J. Date: 11/10/09 Tooling: _____ Date: _____

Stop ***NR2***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

D3560	Rev D
-------	-------

100		0.00							
-----	--	------	--	--	--	--	--	--	--

100

BAND SAW

Bandsaw

Memo

Jeaspa Bandsaw

Cut blanks 16.750" long

110		0.00							
-----	--	------	--	--	--	--	--	--	--

110

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

HAAS CNC vertical machine #1

1- Mill as per Folio FA694 Rev: AA & Dwg D3560 Rev: D
 2-C'sink 0.196" hole on manual mill as per dwg D3560
 3-Deburr per dwg D3560

120		0.00							
-----	--	------	--	--	--	--	--	--	--

120

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

Quality Control

EK- 11/11/09

4 Ø

(4)

SL 11-11-12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 74802

October 6, 2011 1:41:45 PM

74802

Page 2

Item ID: D3560-042 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Arm Weldment
 Start Date: 10/06/11 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 10/17/11 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00		<i>and 11/11/12</i>		<i>4</i>	<i>0</i>		
140 *140* Large Fab Large Fab	Large Fab Memo 1-Weld assembly as per dwg D3560 STEP: 1- clean material (buff bracket and bottom of arm with blue pad) 2- set up bracket and arm on jig 3- preheat bracket and arm with torch 4- clean before welding with brush 5- set up machine to 135 amps 6- weld across bottom and top ends 7- reheat with torch (65 deg C) 8- on one side weld from bottom to top half way 9- same for other side (half way) 10- from half way point weld the rest of the first side (ease off pedal near end) 11- same for remaining side (ease off pedal near end)	0.00 0.00		<i>11-11-16</i>		<i>4</i>	<i>0</i>		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 74802

October 6, 2011 1:41:45 PM

74802

Page 3

Item ID: D3560-042 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Arm Weldment
 Start Date: 10/06/11 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 10/17/11 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00	841417			84 (x4) 242			
160 *160* QC Quality Control	QC9- Inspect visual per QSI004- Fusion Welds Memo	0.00 0.00				4	0	BE11-117	
170 *170* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00				4X 0 M-L 11/14/17			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 74802

October 6, 2011 1:41:45 PM

74802

Page 4

Item ID: D3560-042

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Arm Weldment

Start Date: 10/06/11 Start Qty: 4.00

4

Cust Item ID:

Required Date: 10/17/11 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

180 QC3- Inspect Part Finish 0.00

180

QC

Memo

0.00

Quality Control

Handwritten: 11, 11, 17 (4)

190 Small Fab 0.00

190

Small Fab

Memo

0.00

Small Fab

1-Press bushing in D3560 arm per dwg D3562

Handwritten: 11/11/18 (4)

200 QC5- Inspect part completeness to step on W/O 0.00

200

QC

Memo

0.00

Quality Control

Handwritten: 8 w/11/18

Handwritten: x4, 042

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 74802

October 6, 2011 1:41:45 PM

74802

Page 5

Item ID: D3560-042

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Arm Weldment

Start Date: 10/06/11 Start Qty: 4.00

4

Cust Item ID:

Required Date: 10/17/11 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	Identify as per dwg & Stock Location: <u>WA</u>	0.00							
210									
Packaging	Memo	0.00							
Packaging	*** STOCK IN STEP CELL ***								
220	QC21- Final Inspection - Work Order Release	0.00							
220									
QC	Memo	0.00							
Quality Control									

11-11-18
(4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

October 6, 2011 1:41:50 PM

Page 1

Work Order ID: 74802

74802

Parent Item: D3560-042

D3560-042

Parent Item Name: Arm Weldment

Start Date: 10/06/11

Required Date: 10/17/11

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A New Issue 07.05.24 EC
IPP rev B ECN 987 07.10.09 EC verified by: DD
IPP Rev:C ECN1048 07-12-18 DD verified by: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2808

Manufactured

No

100

Each

18.0000

1

4

D2808

Bushing

**

Location

Loc Qty

Loc Code

GA

18

32896

2

71879

16

4

M6061T6B0.500X05.00

Purchased

No

140

f

14.4750

1.395

5.873684

M6061T6B0 500X05 000

6061-T6 Bar .500 x 5.00

**

Location

Loc Qty

Loc Code

MAT004

14.475

112154

6.935

117933

7.54

119346

190

Each

17.0000

1

4

D3592-1

Manufactured

No

D3592-1

Plate

**

Location

Loc Qty

Loc Code

WA002

17

47015

2

48517

15

4

F.K 11/11/09

5.87

11.11.16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

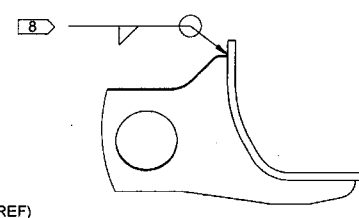
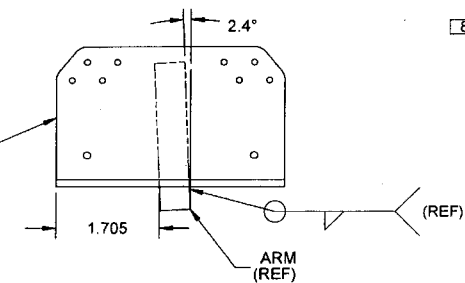
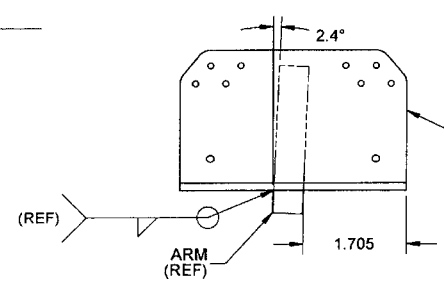
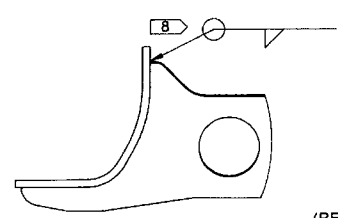
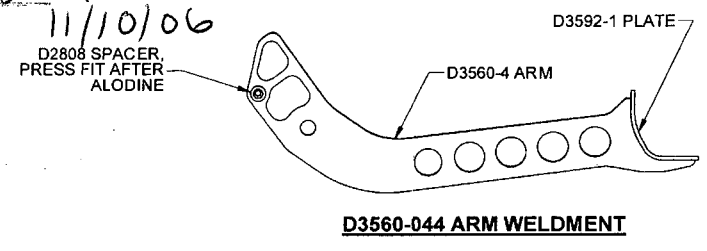
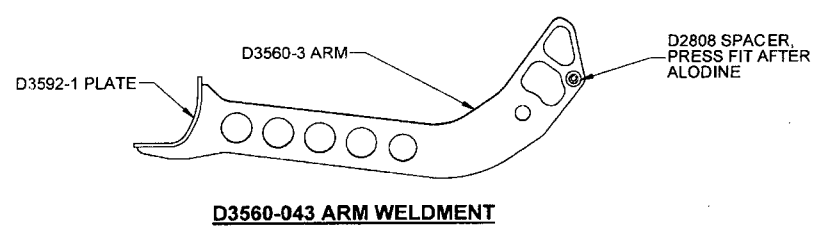
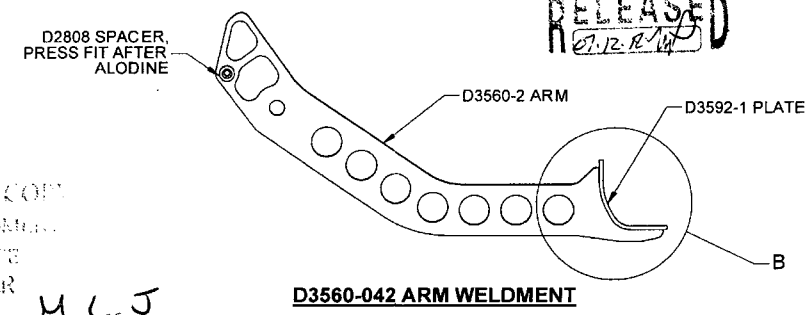
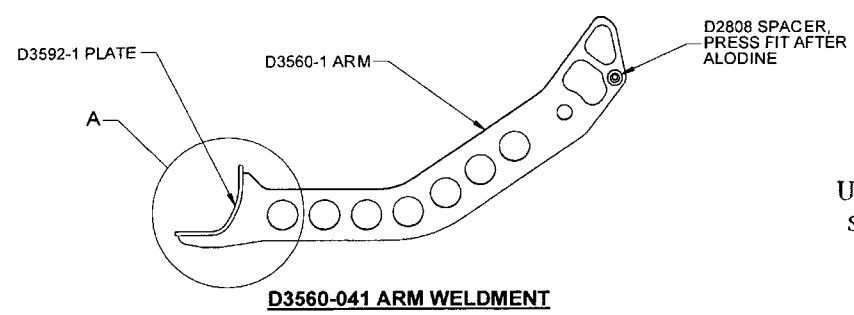
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

RELEASED
07.12.16

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 74802 M.L.J
11/10/06



PARTS LIST

QTY -041	QTY -042	QTY -043	QTY -044	P/N	DESCRIPTION
X				D3560-041	ARM WELDMENT
	X			D3560-042	ARM WELDMENT
		X		D3560-043	ARM WELDMENT
			X	D3560-044	ARM WELDMENT
1	1	1	1	D2808	SPACER
1				D3560-1	ARM
	1			D3560-2	ARM
		1		D3560-3	ARM
			1	D3560-4	ARM
1	1	1	1	D3592-1	PLATE

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 1.23 lbs (TYP)
 - 8) WELDING: PER DART QSI 004

DESIGN	ADD D2808 PRESS FIT NOTE; REDRAWN IN SOLIDWORKS	DC	07.11.16
DRAWN	REMOVE POWDER COAT	CP	07.06.19
CHECKED	REDESIGN AS WELDMENT, ADD POCKETS	CP	07.01.15
MFG. APPR.	NEW ISSUE	CP	06.09.25
APPROVED		BY	DATE
DE APPR.			
DATE	07.11.16		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D3560**

TITLE **ARM WELDMENT**

REV. D
SHEET 1 OF 5
SCALE 1:4

COPYRIGHT © 2006 BY DART AEROSPACE LTD.
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

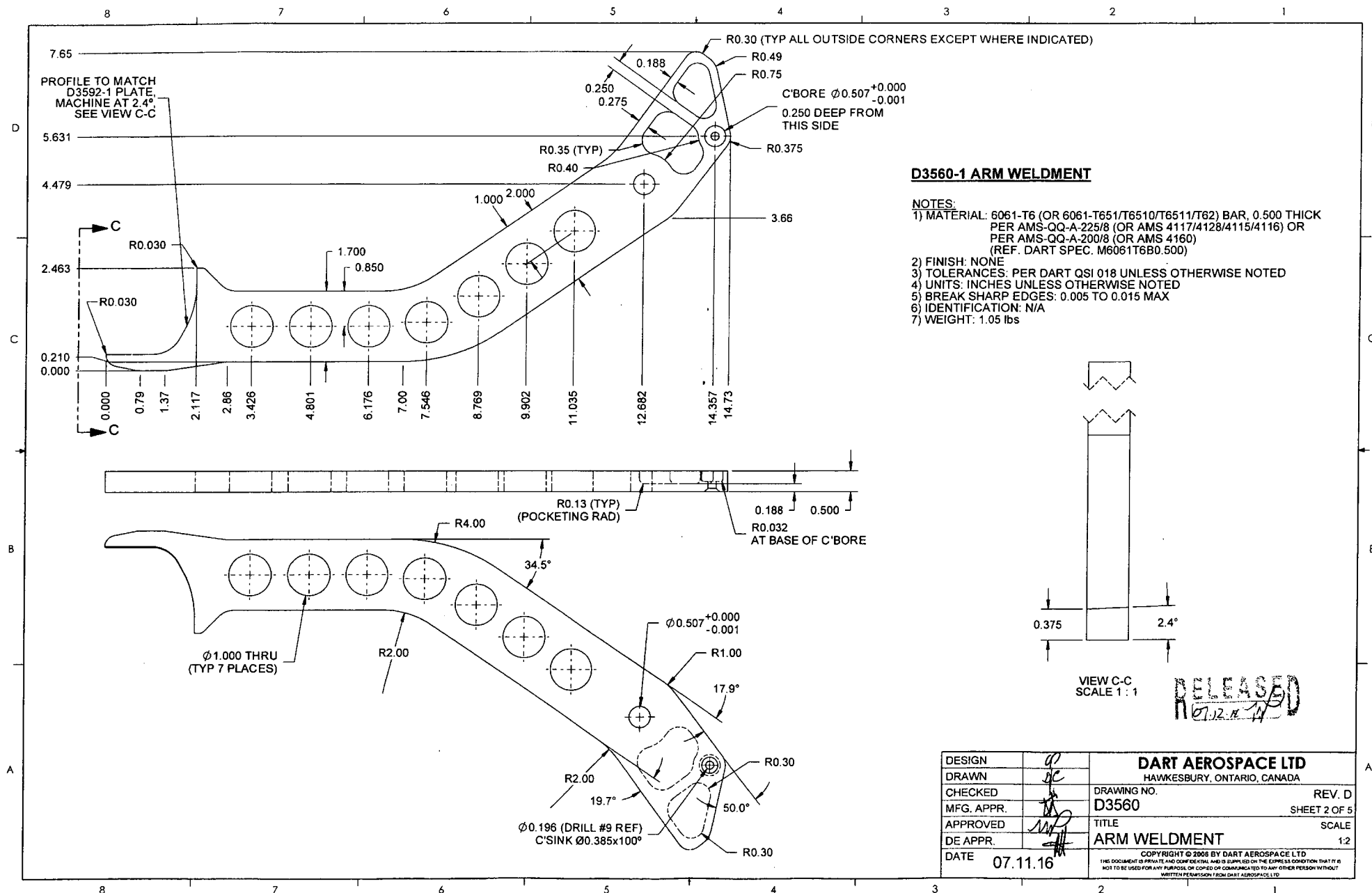
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

74802



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

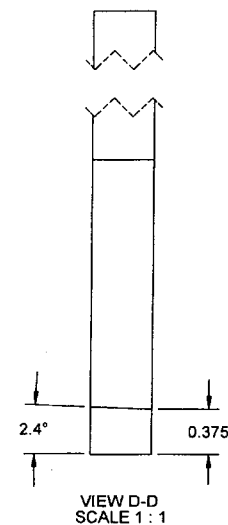
Technical drawing of a hull cross-section showing various dimensions and radii. The drawing includes the following specifications:

- Radii:**
 - R0.30 (TYP ALL OUTSIDE CORNERS EXCEPT WHERE INDICATED)
 - R0.49
 - R0.75
 - R0.35 (TYP)
 - R0.40
 - R0.030
- Dimensions:**
 - 0.188
 - 0.250
 - 0.275
 - 2.000
 - 1.000
 - 1.700
 - 0.850
 - 0.210
 - 0.000
- Vertical Dimensions (from top):**
 - 7.65
 - 5.631
 - 4.479
 - 3.66
 - 2.463
 - 0.210
 - 0.000
- Horizontal Dimensions (from left):**
 - 14.73
 - 14.357
 - 12.682
 - 11.035
 - 9.902
 - 8.769
 - 7.546
 - 7.00
 - 6.176
 - 4.801
 - 3.426
 - 2.86
 - 2.117
 - 1.37
 - 0.79
 - 0.000
- Other Notes:**
 - C'BORE $\phi 0.507^{+0.000}_{-0.001}$
 - 0.250 DEEP FROM THIS SIDE

RELEASED
07-12-18 *11P*

D3560-2 ARM

- NOTES:**
- 1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR, 0.500 THICK
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
PER AMS-QQ-A-200/8 (OR AMS 4160)
(REF. DART SPEC. M6061/T6B0.500)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 1.05 lbs



DESIGN	<i>q</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>jc</i>		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. D
MFG. APPR.	<i>[Signature]</i>	D3560	SHEET 3 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	ARM WELDMENT	1:2
DATE	07.11.16	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

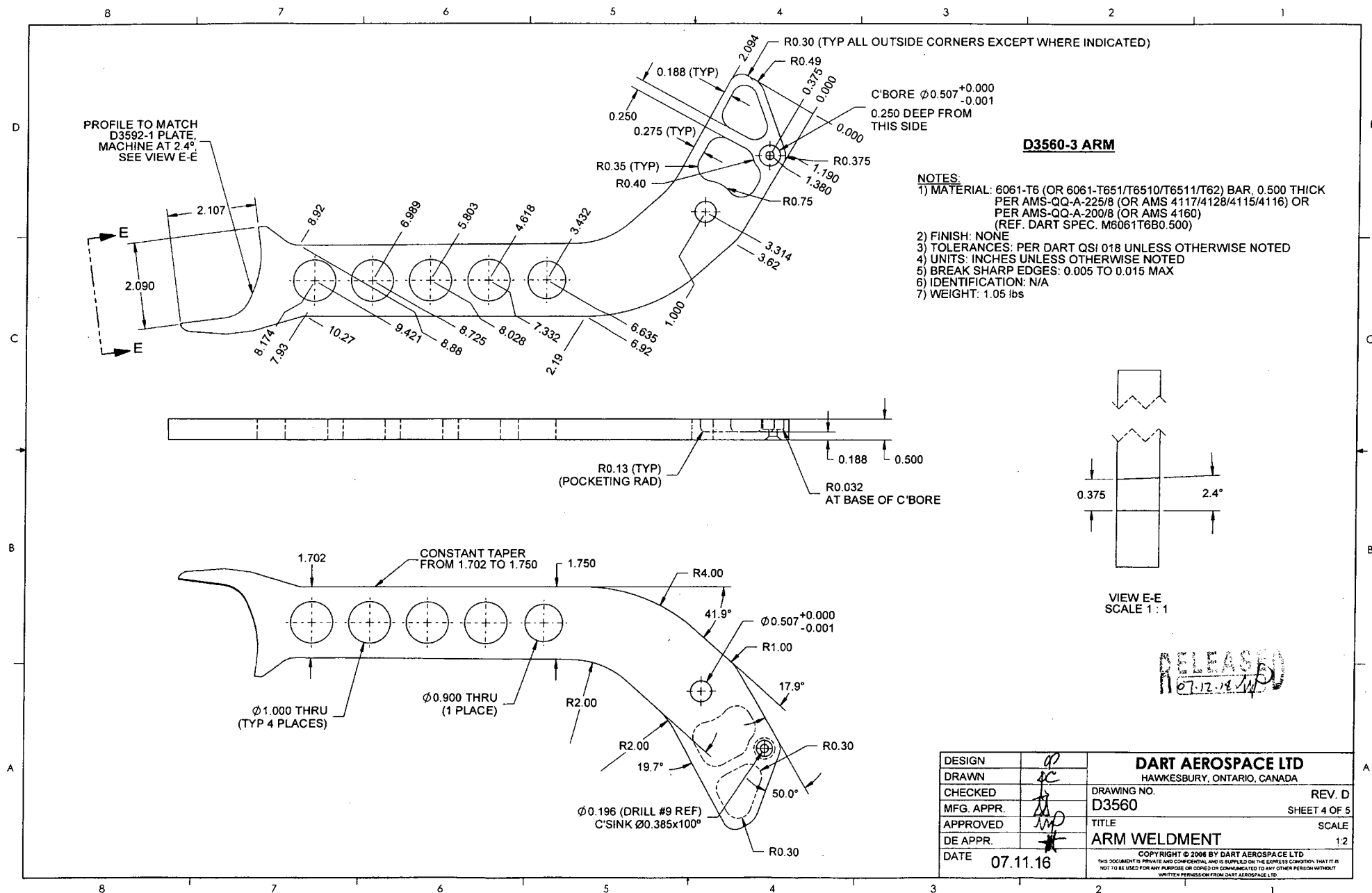
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

74802



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

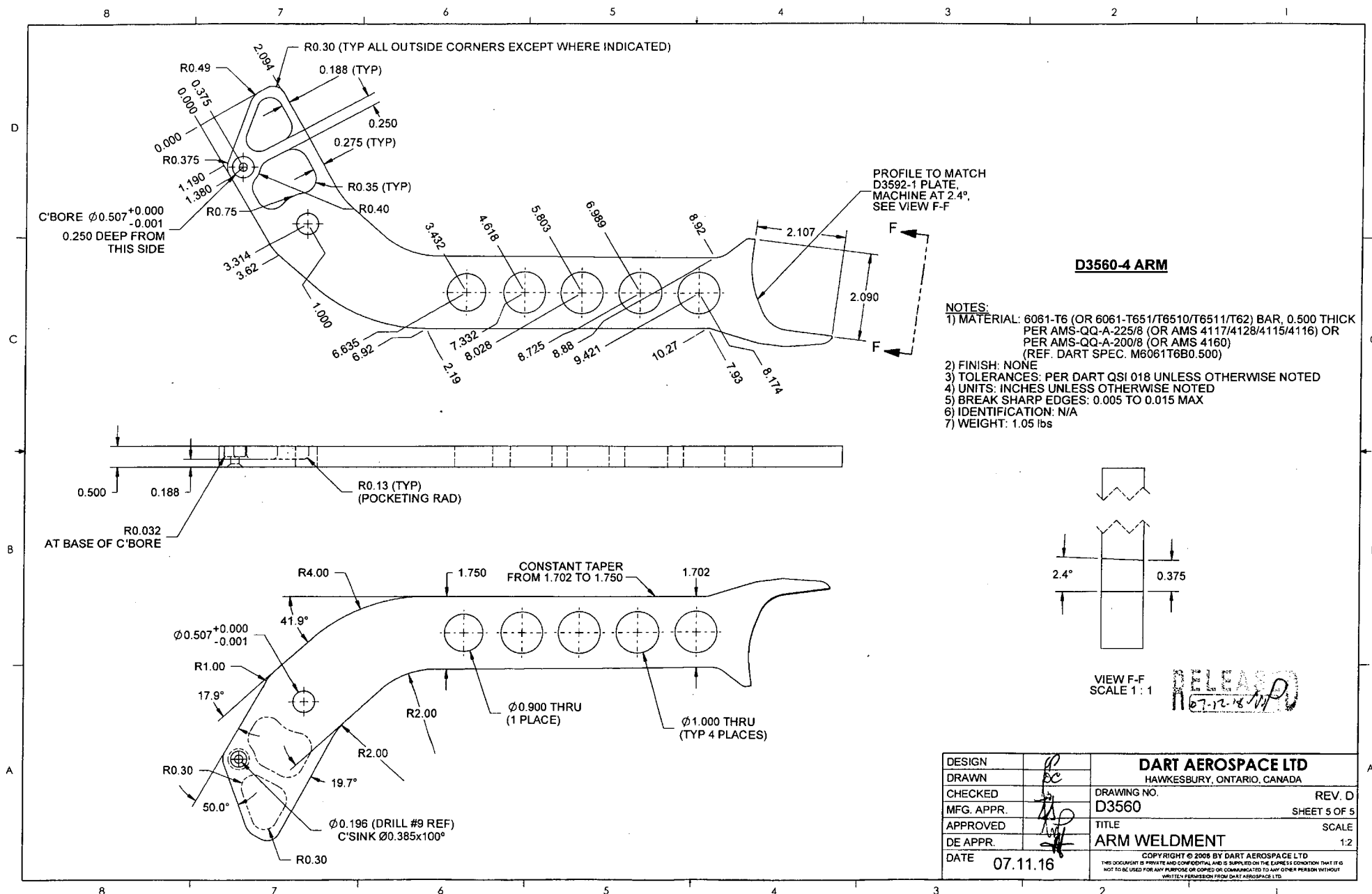
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

74802



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries